

IN THE CLAIMS:

1. (Currently amended) A conductive thermoplastic composition comprising:

about 20 to about 60 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units;

about 30 to about 65 weight percent of a polyamide comprising nylon 6 and nylon 6,6;

about 1 to about 30 weight percent of an impact modifier comprising a styrene-(ethylene-butylene)-styrene triblock copolymer and a styrene-(ethylene-propylene) diblock copolymer; and

about 0.025 to about 40 weight percent of an electrically conductive filler;

wherein all weight percents are based on the total weight of the composition.

2. (Original) The composition of Claim 1, wherein the polyphenylene ether copolymer has an intrinsic viscosity of about 0.20 to about 2.0 dL/g as measured in chloroform at 25°C.

3. (Canceled)

4. (Canceled)

5. (Currently amended) The composition of Claim 1, wherein the polyamide comprises about 3 to about 17 weight percent of poly(pentamethylene carboximide) and about 32 to about 51 weight percent of poly(hexamethylene adipamide)- based on the total weight of the composition.

6. (Original) The composition of Claim 1, wherein the electrically conductive filler is selected from the group consisting of carbon fibers, vapor grown carbon fibers, carbon nanotubes, carbon black, conductive metal fillers, conductive non-metal fillers, metal-coated fillers, and combinations comprising at least one of the foregoing electrically conductive fillers.

7. (Original) The composition of Claim 1, wherein the electrically conductive filler comprises about 2 weight percent to about 40 weight percent of carbon fibers.

8. (Original) The composition of Claim 1, wherein the electrically conductive filler comprises about 0.05 weight percent to about 10 weight percent of vapor grown carbon fibers.

9. (Original) The composition of Claim 1, wherein the electrically conductive filler comprises about 0.025 weight percent to about 10 weight percent of carbon nanotubes.

CI 10. (Original) The composition of Claim 1, wherein the electrically conductive filler comprises about 0.5 weight percent to about 25 weight percent of carbon black.

11. (Original) The composition of Claim 1, wherein the electrically conductive filler comprises about 1 weight percent to about 40 weight percent of a conductive metal filler.

12. (Original) The composition of Claim 1, wherein the electrically conductive filler comprises about 1 weight percent to about 40 weight percent of a conductive non-metal filler.

13. (Original) The composition of Claim 1, wherein the electrically conductive filler comprises about 1 weight percent to about 40 weight percent of a metal-coated filler.

14. (Cancelled)

15. (Cancelled)

16. (Original) The composition of Claim 1, further comprising about 0.1 to about 5 weight percent of a compatibilizing agent.

17. (Original) The composition of Claim 16, wherein the compatibilizing agent is selected from the group consisting of citric acid, malic acid, maleic acid, maleic anhydride, fumaric acid, and combinations comprising at least one of the foregoing compatibilizing agents.

18. (Original) The composition of Claim 1, further comprising about 0.05 to 1 weight percent of pentaerythritol tetrakis(3-laurylthiopropionate).

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19. (Original) The composition of Claim 1, further comprising at least one additive selected from the group consisting of stabilizers, antioxidants, antiozonants, mold release agents, dyes, pigments, UV stabilizers, non-conductive fillers, viscosity modifiers, and combinations comprising at least one of the foregoing additives.

20. (Original) The composition of Claim 1, wherein the composition after molding exhibits a specific volume resistivity up to about 10^5 ohm-cm.

21. (Currently amended) A conductive composition comprising:

about 30 to about 45 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units;

about ~~of~~ 30 to about 65 weight percent of a polyamide comprising nylon 6 and nylon 6,6 ~~selected from the group consisting of poly(hexamethylene adipamide), poly(pentamethylene carboximide), and mixtures thereof;~~

about 5 to about 20 weight percent of an impact modifier comprising a styrene-(ethylene-butylene)-styrene triblock copolymer and a styrene-(ethylene-propylene) diblock copolymer;

about 0.5 to about 5 weight percent of an electrically conductive filler selected from the group comprising a conductive carbon black, vapor grown carbon fibers, and mixtures thereof; and

about 0.1 to about 5 weight percent a compatibilizing agent selected from the group consisting of citric acid, maleic acid, maleic anhydride, malic acid, fumaric acid, and combinations comprising at least one of the foregoing compatibilizing agents;

wherein all weight percents are based on the total weight of the composition.

22. (Cancelled)

23. (Original) The composition of Claim 21, wherein the electrically conductive filler is added to the composition as a masterbatch in the polyamide.

24. (Previously amended) The composition of Claim 21, comprising about 5 to about 15 weight percent of the poly(pentamethylene carboximide) and about 25 to about 50 weight percent of the poly(hexamethylene adipamide).

25. (Currently amended) A conductive composition comprising:

about 32 to about 38 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units;

about 35 to about 40 weight percent of poly(hexamethylene adipamide);

about 8 to about 12 weight percent of poly(pentamethylene carboximide);

about 5 to about 10 weight percent of a styrene-(ethylene-butadiene)-styrene triblock copolymer;

about 5 to about 10 weight percent of a styrene-(ethylene-propylene) diblock copolymer;

about 1.0 to about 2.5 weight percent of a conductive carbon black; and

about 0.3 to about 1.1 weight percent of citric acid;

wherein all weight percents are based on the total weight of the composition.

26. (Currently amended) A conductive thermoplastic composition comprising the reaction product of:

about 20 to about 60 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units;

about 30 to about 65 weight percent of a polyamide comprising nylon 6 and nylon 6,6;

about 0.1 to about 5 weight percent of a compatibilizing agent;

about 1 to about 30 weight percent of an impact modifier comprising a styrene-(ethylene-butylene)-styrene triblock copolymer and a styrene-(ethylene-propylene) diblock copolymer; and

about 0.025 to about 40 weight percent of an electrically conductive filler;

wherein all weight percents are based on the total weight of the composition.

27. (Original) An article comprising the composition of Claim 26.

28. (Original) An automobile exterior panel comprising the composition of Claim 26.

29. (Original) A pellet comprising the composition of Claim 26.

30. (Currently amended) A method for preparing a conductive thermoplastic composition, comprising: melt blending about 20 to about 60 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units, about 30 to about 65 weight percent of a polyamide comprising nylon 6 and nylon 6,6, about 5 to about 20 weight percent of an impact modifier comprising a styrene-(ethylene-butylene)-styrene triblock copolymer and a styrene-(ethylene-propylene) diblock copolymer, and about 0.025 to about 40 weight percent of an electrically conductive filler, and a compatibilizing agent wherein all weight percents are based on the total weight of the composition.

31. (New) A conductive thermoplastic composition comprising:

about 20 to about 60 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units;

about 30 to about 65 weight percent of a polyamide comprising nylon 6 and nylon 6,6;

about 1 to about 30 weight percent of an impact modifier comprising a styrene-(ethylene-butylene)-styrene triblock copolymer and a styrene-(ethylene-propylene) diblock copolymer;

about 0.025 to about 40 weight percent of an electrically conductive filler; and

a product of a reaction of polyphenylene ether, polyamide and a compatibilizing agent,

wherein all weight percents are based on the total weight of the composition.

32. (New) A conductive thermoplastic composition consisting essentially of:

about 20 to about 60 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units;

about 30 to about 65 weight percent of a polyamide;

about 1 to about 30 weight percent of an impact modifier comprising a styrene-(ethylene-butylene)-styrene triblock copolymer and a styrene-(ethylene-propylene) diblock copolymer; and

about 0.025 to about 40 weight percent of an electrically conductive filler;

wherein all weight percents are based on the total weight of the composition.

33. (New) A conductive thermoplastic composition consisting essentially of:

about 20 to about 60 weight percent of a polyphenylene ether copolymer comprising about 75 to about 90 weight percent of 2,6-dimethyl-1,4-phenylene ether units and about 10 to

about 25 weight percent of 2,3,6-trimethyl-1,4-phenylene ether units;

about 30 to about 65 weight percent of a polyamide comprising nylon 6 and nylon 6,6;

about 1 to about 30 weight percent of an impact modifier comprising a styrene-(ethylene-butylene)-styrene triblock copolymer and a styrene-(ethylene-propylene) diblock copolymer;

about 0.025 to about 40 weight percent of an electrically conductive filler; and

a product of a reaction of polyphenylene ether, polyamide and a compatibilizing agent,

wherein all weight percents are based on the total weight of the composition.
